'creating a level playing field'

CONSULTATION PAPER ON OVER THE TOP (OTT) SERVICES

JUNE 2016

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PREFACE

Zimbabwe has taken great strides in the development of telecommunications in the past few years. Networks transitioned from first generation to third generation and more recently fourth generation networks as the local operators continuously invest in their networks. The access to high speed internet has further encouraged the uptake and growth of new modes of communication such as Over-the-Top (OTT) services. These OTT services ride on the investments of the local operators and have posed a threat to the continued viability and sustenance of the local networks.

This document discusses different aspects of Over-The-Top (OTT) services, focusing particularly on whether or not such services should be regulated and if so; determine what regulatory measures should be adopted to ensure that all stakeholder interests can be best protected. It presents views on the impact of OTT services to licensed operators, consumers and the economy as well. OTT services remain a topical issue around the world and various countries have at some point attempted to or developed a framework to regulate the provision OTT services.

This consultation paper on Over-the-Top is intended to generate discussion and solicit views from stakeholders in the industry. The views and discussion points summarised within the document should not be interpreted as determinations of the Authority. Stakeholders are requested to send their comments and views on the various issues addressed in the consultation paper by 01 August 2016 to:

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1. INTRODUCTION

The rapid growth of the internet coupled with the explosion of affordable smartphones and expansion of broadband networks have paved the way for a new category of competitors in the telecommunications market known as Over-the-Top (OTT) players. They affect the business of the telecommunications service providers in two main ways i.e. they increase the load on the network and they lead to the substitution of core services with Internet Protocol (IP) alternatives. This consultation paper analyses the implications of the growth of OTTs on the local industry, international regulatory trends in other countries and considers options for the treatment of OTTs.

1.1   WHAT ARE OVER-THE-TOP (OTT) SERVICES?

In general, Over-the-top (OTT) services are services carried over the networks, delivering value to customers, but without any carrier service provider being involved in planning, selling, servicing or provisioning of the services. The Organisation for Economic Co-operation and Development (OECD) Communications Outlook (2013) described OTT services as 'video, voice and other services provided over the Internet rather than solely over the provider's own managed network.' (OECD 2013) Services provided under the OTT umbrella typically relate to media and communications. This paper focuses on OTT communication services i.e. OTT Voice and OTT messaging. Examples of these services are WhatsApp, Viber and Skype amongst others.
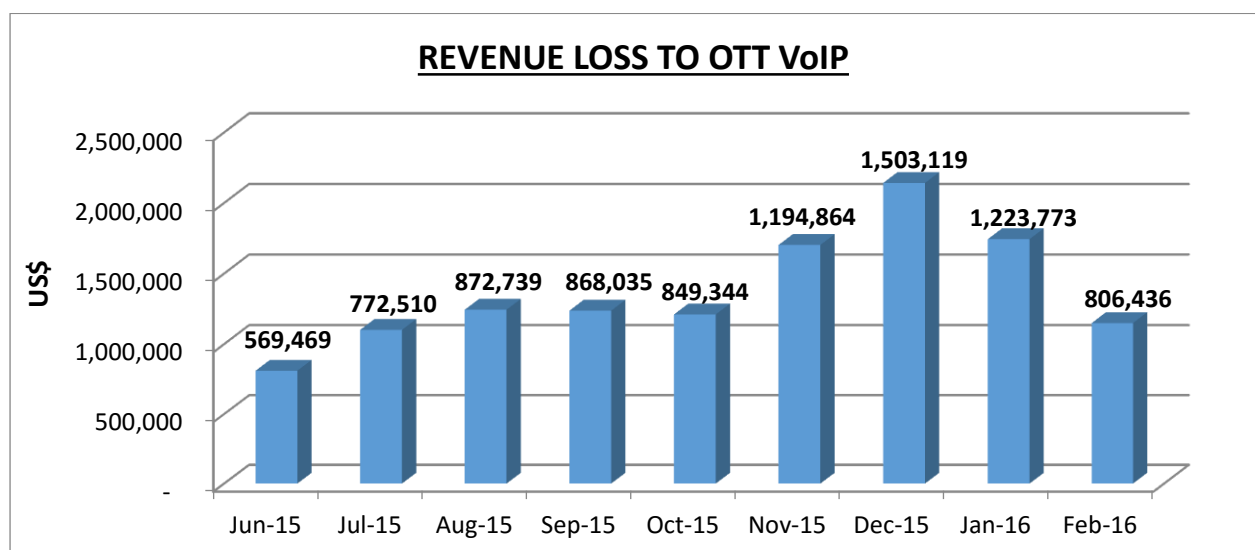
> **Question 1: Do you agree with the definitions of OTT services stated above? If not in agreement, please provide reasons. Suggestions are also welcome.**

1.2 BACKGROUND

Telecommunications operators the world over have expressed concern over the proliferation of unregulated Over-the-Top services and their impact on licensed operators. In Zimbabwe, the local operators have also made representations on how they have been adversely impacted by the proliferation of OTT services, in particular those offering voice services. The negative impact of OTTs on the local networks was first felt in 2013 when the use of OTTs rose exponentially in the country. The operators propose that whilst they do not seek the ban of Over-the-Top services, they appeal for regulatory interventions that ensure a win-win situation for all parties, consumers included. It is in this light that the Authority decided to consult all stakeholders in order to come up with appropriate recommendations that balance the interests of all.

1.3 STATEMENT OF THE PROBLEM

Local operators have complained that their revenues and profits are being eroded by Over-the-Top service providers. Revenues have been declining since 2013 as a result of the substitution of voice and sms by IP voice and messaging services of the international OTT players who ride on their networks. The growth in data revenue has not been sufficient to offset the sharp decline in voice and sms revenues. In the 9 month period from June 2015 to February 2016 local mobile operators lost an estimated $12,336,594 as measured through OTT voice traffic on their networks. The monthly loss in revenues is shown below:

REVENUE LOSS TO OTT VoIP

Month	US$
Jun-15	569,469
Jul-15	772,510
Aug-15	872,739
Sep-15	868,035
Oct-15	849,344
Nov-15	1,194,864
Dec-15	1,503,119
Jan-16	1,223,773
Feb-16	806,436

The major challenge is that investment in future networks is at risk; the consumer will be prejudiced in the long term. Operators` investment in LTE technology will create a more open environment for OTT providers and third party services as it further facilitates the delinking of delivery of services from the underlying network and the local telecommunications industry will lose even more.

Licensed telecommunications service providers argue that they have, over the years of operations, invested billions in procuring relevant telecommunications licences and setting-up infrastructure to offer quality service to their customers. While they are regulated bona fide operators, OTT service providers:

- Use the services on their networks without making any contribution to the sustainability of the infrastructure;
- Are not licensed by the country to provide regulated services to its citizens and thus do not incur any license costs and other obligations;
- Are not registered as operating entities within the country, and therefore are not subject to relevant taxes as is the case with the local operators.

They argue that the playing field is not even and due to the factors stated above OTT providers are able to offer 'almost free' services as they ride on their networks for at no cost.

A further problem for nations like Zimbabwe is that since the OTT providers operate independent of geography and are domiciled abroad, the macroeconomic benefits of their businesses are only enjoyed in their land of domicile and national governments are losing tax revenue due to declining viability of the local network operators. Due to these imbalances it may be necessary to come up with a regulatory framework for provision of OTT services in the country to ensure a win-win situation for all stakeholders.

> **Question 2: Do you agree with the above stated challenges? Could it be considered too early to establish a regulatory framework for OTT services in Zimbabwe? Kindly provide explanations for your responses.**

1.4 PURPOSE

This consultation paper on Over-the-Top services is intended to seek public feedback and solicit views from stakeholders in the industry in order to come up with a framework that ensures strong sector growth anchored on innovation, fair competition, affordability and good quality of services.

1.5 OBJECTIVES

The objectives of this consultation paper on Over-the-Top services are:

- Examine the impact of OTT VoIP services on stakeholders in the telecommunications industry;
- Review and assess the current legislative provisions for the operating of OTT services in Zimbabwe;
- Seek public feedback in order to come up with appropriate recommendations on the regulatory treatment of OTT services in Zimbabwe;

1.6 CONSULTATION PROCESS

The Authority is seeking the views and opinions of stakeholders regarding the discussion points made in this document. Stakeholders should comment on whether they concur or disagree with the viewpoints and provide explanations/reasons for each response.

This document will be made available for public consultation for a 2 month period. Based on consultative feedback received on the above, the Authority shall prescribe recommendations in determining the regulatory treatment of OTT services, particularly OTT VoIP services, in Zimbabwe.

CHAPTER 2: OVER THE TOP SERVICES: AN OVERVIEW.

2.1 OVER THE TOP COMMUNICATION SERVICES

OTT communication services refer to services whose primary applications lie in communications but use the internet as the transport medium rather than the legacy telephony infrastructure. There are two different types of OTT communication services which are OTT VoIP and OTT Messaging services.

i) OTT VoIP SERVICES

Over-the-Top VoIP services are voice and/or video-based internet communication services. They have become a popular alternative to the traditional phone call whether mobile or fixed. Examples of these services are as follows:

Table 1: Examples of OTT messaging

Skype	300 million users worldwide (2015) 3 billion minutes a day
Viber	249 million users worldwide (2015)
Facetime	Allows video calling between iPhone, iPad and MacBook users
WhatsApp	900 million users worldwide

These OTT VoIP services have witnessed strong growth over the past few years which can be attributed to several factors such as increasing smartphone penetration, increasing broadband coverage and usage as well as their low costs which make them an attractive proposition, especially for international calling. The most popular of these services in Zimbabwe is WhatsApp. WhatsApp accounts for 95% of all OTT VoIP traffic in the country.

There are three main variations to OTT VoIP which are:

i)   App to App- Calling app to app over the Internet

ii)   App to PSTN- Calling from an OTT app to the mobile or fixed network

iii)   PSTN to App- Calling from mobile or fixed network to OTT app

ii) OTT MESSAGING

Over-the-Top messaging platforms provide instant messaging services to the consumers over the Internet, as an alternative to text messaging services (SMS) provided by authorized telecommunications mobile operators. An example of an OTT messaging service is WhatsApp. Even more than OTT voice, IP messaging has shown very strong growth, simply because of the low bandwidth use and better feature set (sending text, audio and graphical content) at a very low cost.

> **Question 3: Do you agree with the given overview of types of OTT Communication services? Additions are welcome**

2.2 DEFINITION OF AN OTT SERVICE PROVIDER

In general, an OTT service provider can be defined as a service provider offering Information and Communication Technology (ICT) services, but neither operates a network nor leases network capacity from a network operator. Instead, OTT providers rely on the global internet to reach the user, hence going "over-the-top" of a telecommunication service provider's network.

OTT service providers can access customers or end-users in two different ways:

    (a) These OTT services ride over the top of the telecommunications pipe which is connected to the user device through mobile networks as shown in Figure 1 below:

Figure 1: OTT riding over Telecommunication Service Providers
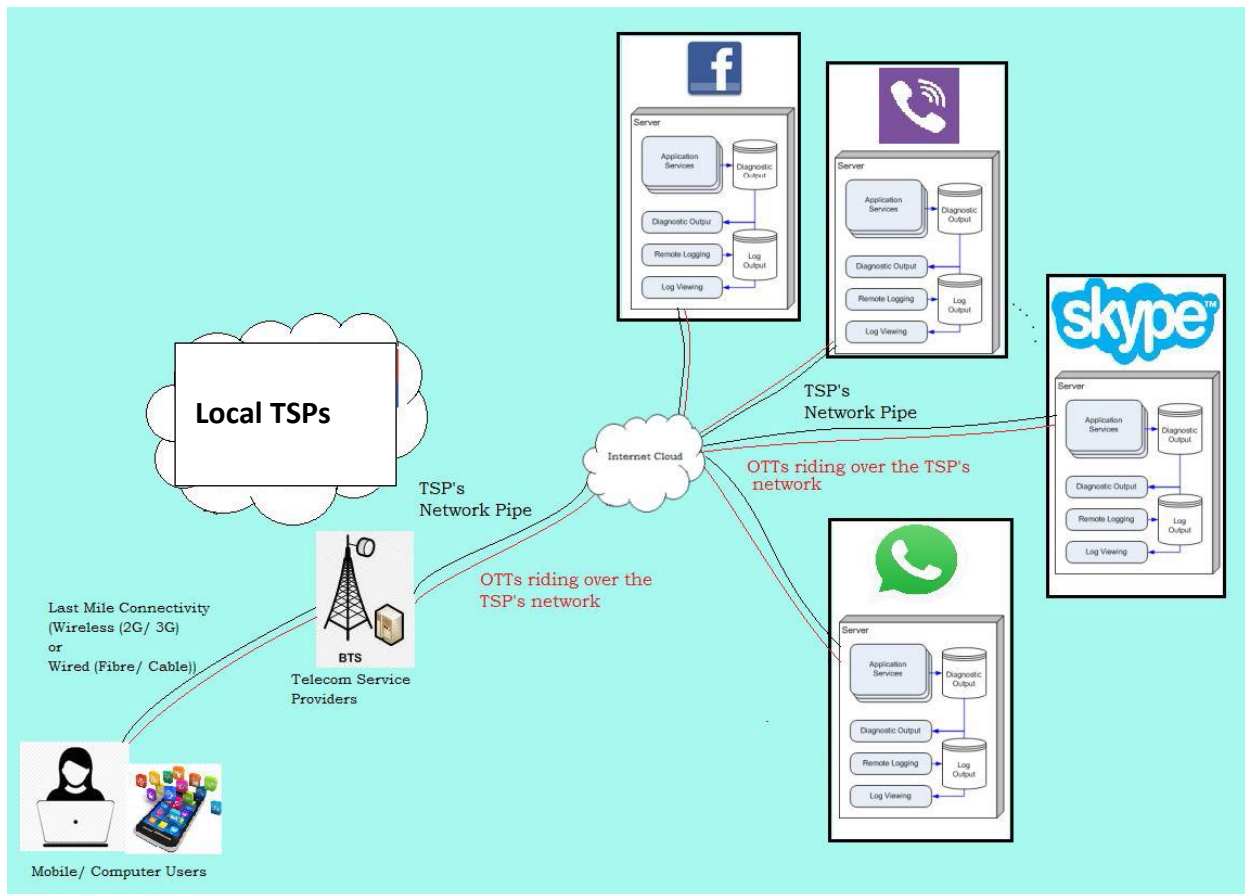
b. The OTT service could also ride over the bandwidth provided by the Wi-Fi operator or a cable operator as shown in figure 2 below. The last mile connectivity in this case will be that of Wi-Fi hot spots connected to the customer.

Figure 2: OTT riding over Other Service Providers
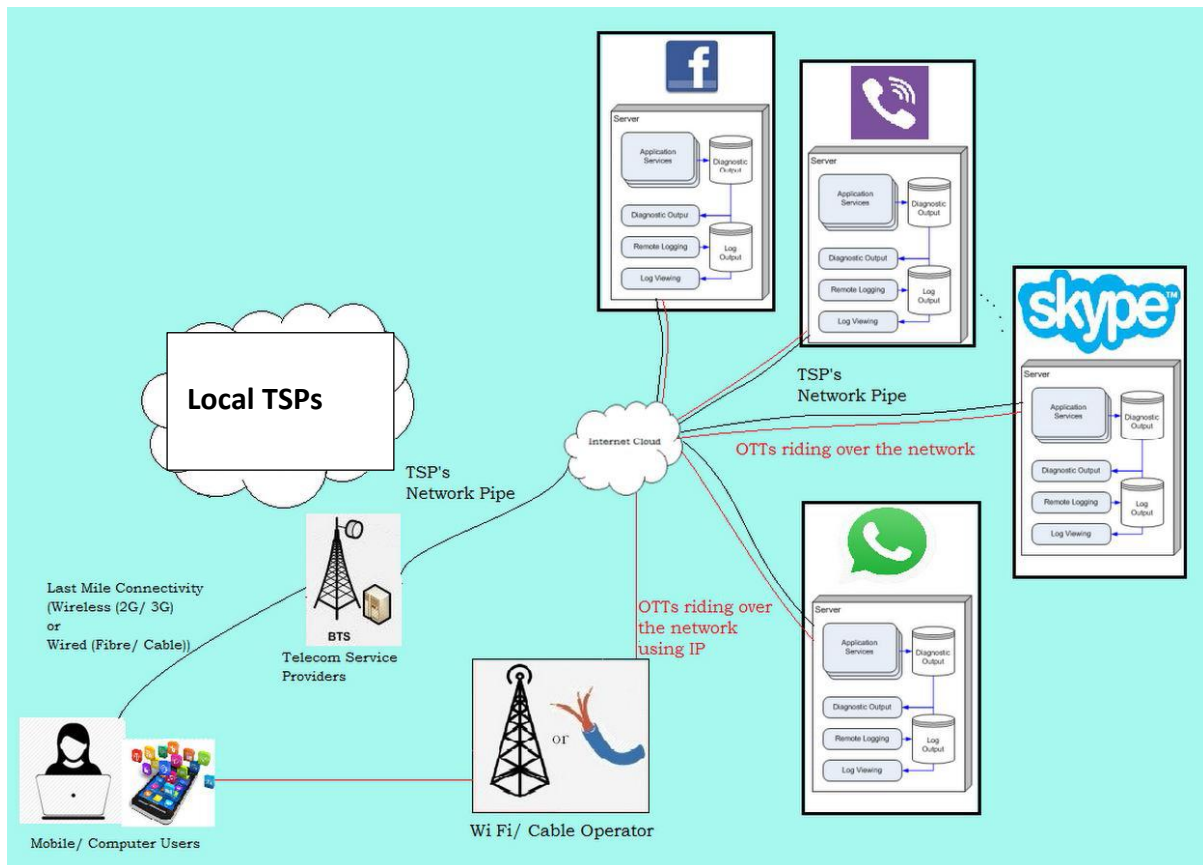
Question 4: Do you agree with the given explanation of the ways in which OTT operators get access to end users? If not provide detailed reasons. If the explanation is not exhaustive additions are welcome.

2.3 CHARACTERISTICS OF OTT SERVICES

The identified common characteristics of OTT services are as follows:

a) The OTT service providers do not pay, for the most part, to terminate traffic on a mobile or fixed network, where the service is actually terminated on the local network of the fixed or mobile provider. That is, they make no contribution to the sustainability of the network on which they must rely;

b) OTT providers make use of the Telecommunication Service Providers' (TSPs) infrastructure to reach their customers and offer products/services that not only

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make money for them but also compete with the traditional services offered by Telecommunication Service Providers (TSPs).

c) They provide services in markets in which they are not licensed to provide such services;

d) They do not pay taxes to most governments of the countries they offer services or contribute to any universal service funds, which are used to develop the ICT infrastructure in the countries;

e) They provide services which deplete the quality of service on both mobile and fixed networks because such services use increasing amounts of network capacity and bandwidth;

f) Some OTT services, by nature of their architecture, like Viber, can result in denial of service attacks on domestic networks;

g) Offer cheaper and more innovative services.

> **Question 5:** **Do you agree with the stated characteristics of OTT services above? If not provide detailed reasons. Additions are also welcome.**

1.5 DRIVERS OF OTT GROWTH

The rapid pick-up in the growth of OTT usage in Zimbabwe can be attributed to the following set of drivers:

i.   **Technology readiness**: The growing smartphone penetration in the country (which is estimated to be over 15%) and the increasing availability of high speed broadband have been important drivers of Over-the-Top services usage in the country.

ii. **Cost incentive**: Compared to SMS and traditional Voice, OTT alternatives are considerably cheaper. The cost incentive has been a major driver of the uptake of OTT services in the country.

iii. **Advanced features of OTT services**: Consumers do not just want to share information; there is increasing interest in the sharing of pictures, videos and audios. Explosion of user generated content also has led to increased use of OTTs amongst social groups as OTTs present a platform to share that content. Hence the high social propensity to adopt OTTs is high.

iv. **Strength of OTT platform**: The presence of a single Operating System (OS)platform with a large share of the population (e.g. Android) will strengthen the OTTs specific to that OS. In Zimbabwe smartphones with Android Operating System are the most popular and this has driven the growth of Android based apps

v. **Scalability of the services**: OTT players are at an advantage when it comes to scaling up any incremental/ new services. The OTT players can build new services without investing in or developing the infrastructure, since they will be riding over service providers' network.

> **Question 6: Do you agree with any of the above stated drivers of OTT growth? If not kindly provide reasons. Additions are also welcome.**

CHAPTER 3: IMPACT OF OTT SERVICES

2.1 IMPACT ON LICENSED TELECOMMUNICATION SERVICE PROVIDERS

2.1.1 ZIMBABWEAN EXPERIENCE

Local telecommunications service providers have raised concerns over the financial impact of OTT VoIP services on revenues. Of the OTT services, OTT VoIP has made the greatest negative impact on their revenues. The revenue earned by the TSPs for one Minute of Usage (MoU) in traditional voice is $0.16 on average; the average size of a one minute VoIP call is around 150 KB as compared to data revenue earned for one minute of VoIP usage which is around $0.015. While the average holding time in a traditional voice call is around 2 minutes, in VoIP calls it is more than 6 minutes. However, with new coding techniques, the amount of data consumed for one minute of data will further come down drastically and the network owners will not earn anything.

The scenario has been characterised by falling traditional voice traffic and rising OTT VoIP traffic. From July 2015 to February 2016 a total of 115,555,702 minutes of IP voice traffic was measured on the local operators` networks. The growth in OTT VoIP traffic in the country was exacerbated by the introduction of WhatsApp calling mid-2015. The growth in OTT VoIP traffic on the mobile networks from July to December 2015 is shown in figure 3 below:

Figure 3: Growth in OTT VoIP traffic
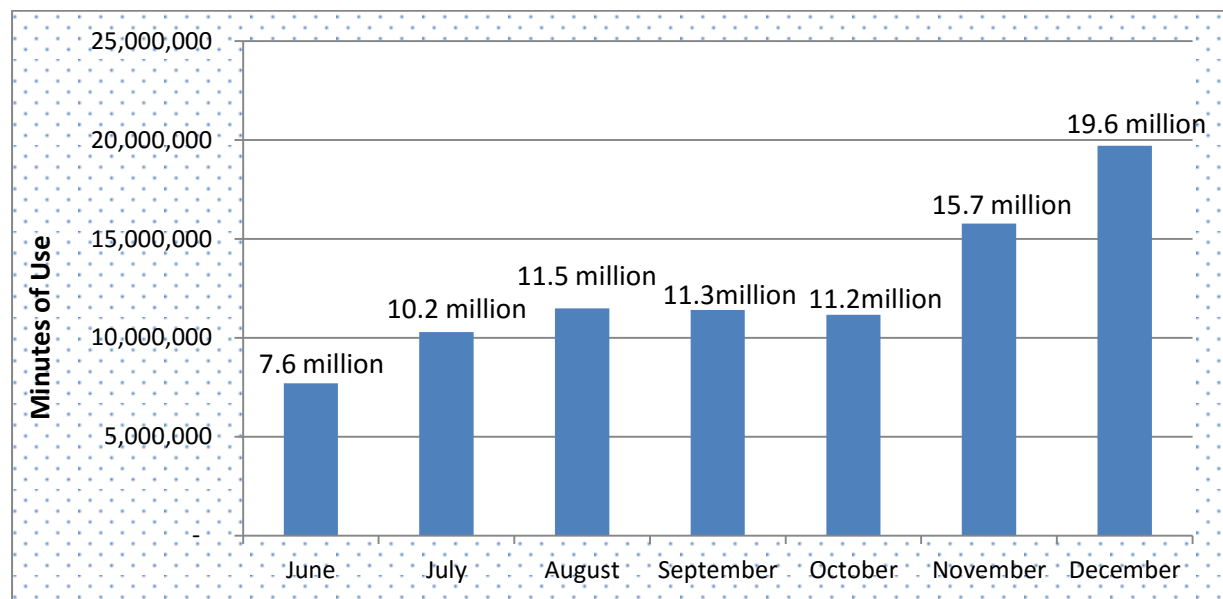
As OTT VoIP traffic is increasing traditional voice traffic has been declining due to the substitution effect. The mobile operators have been the most affected. The trend of mobile voice traffic from 2010 to 2015 is shown in Figure 4 below:

Figure 4: Decline in mobile voice traffic
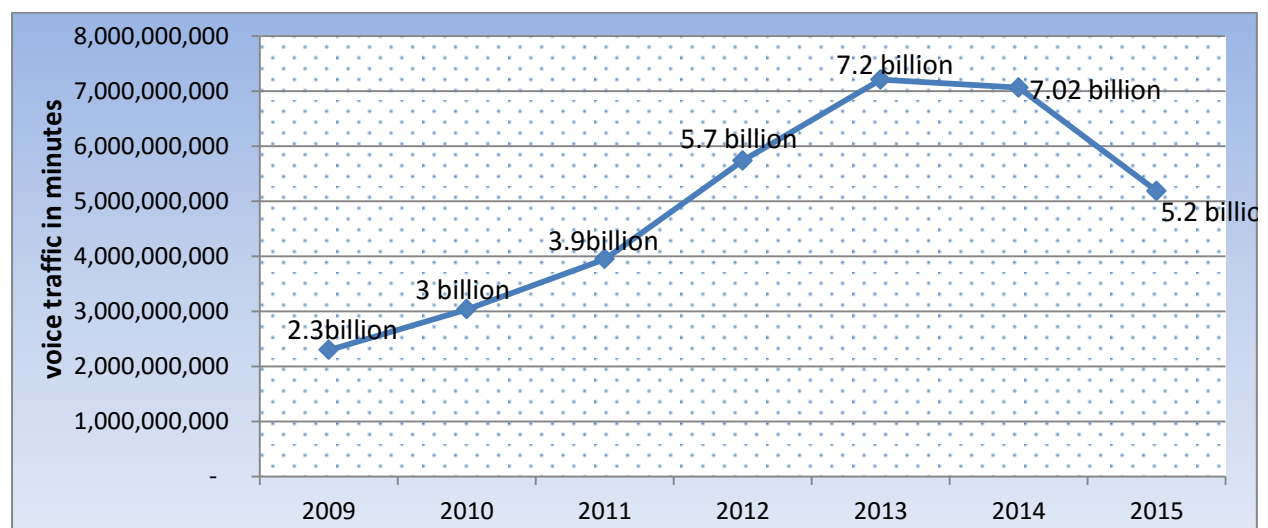
The dip in mobile voice traffic after 2013 coincides with the rise in the use of Over-the-Top services in the country. International traffic has been negatively impacted by OTTs. Skype, Viber and WhatsApp calling have become very popular for alternatives to international calling. International incoming voice was a major source of revenue for the

local operators. The decline in total international incoming and outgoing traffic is shown in Figure 5 below:

Fig 5: Decline in International Traffic
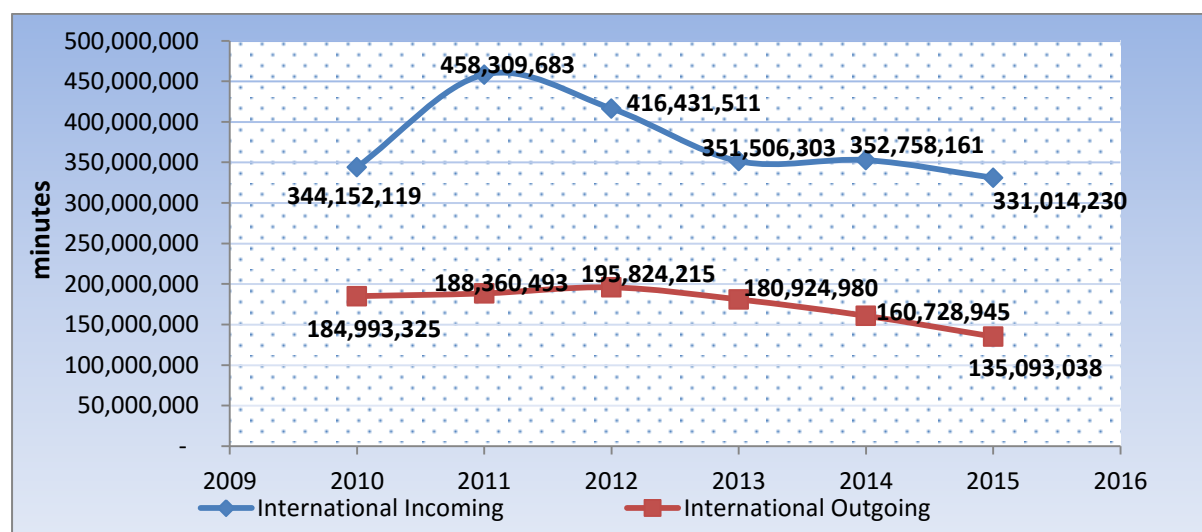
Source: POTRAZ, Operator Returns

The proliferation of Over-the-Top services has led to an exponential increase in the data traffic of the local operators especially the mobile networks. A major contributor to the increased data traffic is the growing consumer appetite for more video. The exponential growth in the consumption of mobile data from 2012 to 2015 is shown in Figure 6 below:

Figure 6: Mobile data consumption
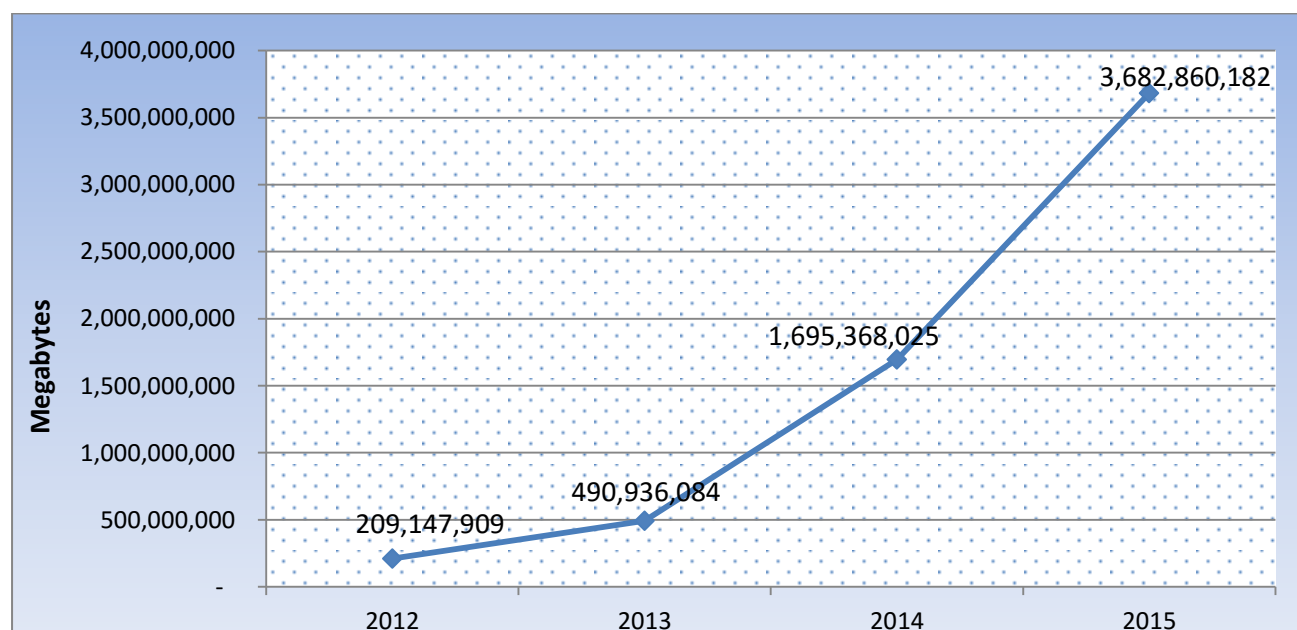
The OTT providers are quick to point out that increased data usage augments revenue flows of the Telecommunication Service Providers. However, an examination of operator revenues shows that the loss in revenue to OTTs is much greater than the gain in data revenues; as a result total mobile revenues are declining as shown in Figure 7 below:

Figure 7: Mobile Revenues

Source: POTRAZ, Operator Returns

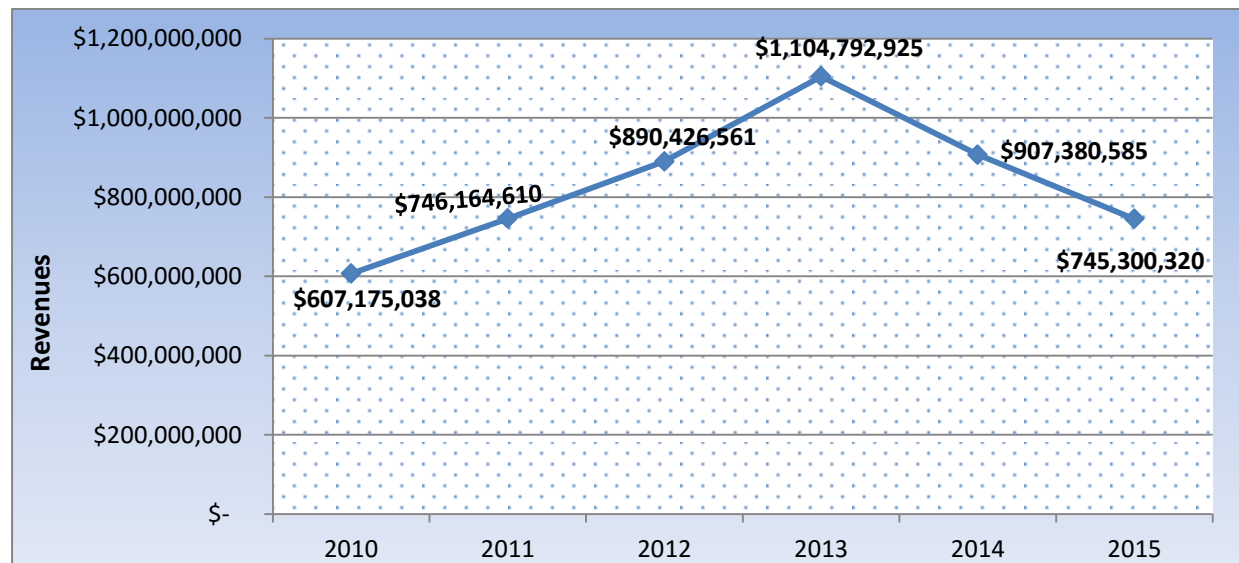There is a limitation to the general proposition that increased OTT app usage augments revenue flows of the Telecommunication Service Providers because with the evolution of new coding techniques (I2S for audio and HVEC for video) apps are being designed to consume minimal bandwidth and improved call/ video quality; hence the data revenue from the use of OTTs will decline in the future and overall revenue will decline.

> **Question 7: Do you agree with the explained impacts of OTTs on the licenced telecommunication service providers in Zimbabwe? If not in agreement, kindly explain in detail. Additional impacts are also welcome**

2.2 CONSUMER IMPACT

In determining the overall treatment of OTT services, the impact such services have on the consumers has to be analysed. There are several advantages associated with the availability of OTT services such as:

❖ **Low Cost/ Affordability**

OTT services are significantly cheaper than conventional telecommunication services and this has been the major reason for the increasing demand for these services. They also provide an opportunity and medium for access to communication services to people who may ordinarily not afford telecommunication services.

❖ **Features**

As much as OTT services also offer similar features to those available via traditional public telecommunications services, some of them have more advanced features such as video calling and group chats amongst which are not ordinarily offered by the traditional telecommunication operators in Zimbabwe.

❖ **Choice**

OTT services provide additional options within the environment to consumers. In turn, the consumer is empowered by having the choice to decide which services best fit his/her need.

❖ **Portability**

Portability also makes OTT services a convenient option where one can be reached regardless of location. Communication can happen anywhere and at any time as long as there is a broadband connection.

As much as there have been positives to the use of OTTs by consumers that are also some disadvantages such as:

❖ **Treatment of Complaints**

Whilst complaints made against authorised service providers can be dealt with by the regulator, similar treatment is not afforded to unregulated services.

❖ **Emergency calls**

Traditional phone systems are designed for emergency calls to be diverted to emergency call centres. Local emergency services are not accessible via OTT VoIP; the physical location from which the call originated cannot be easily established.

❖ **Data Privacy and Security**

Data privacy is not guaranteed with the use of Over-the-Top Services as they are not bound by the data protection provisions of the country. Information shared can be easily accessed by unauthorised third parties and some OTTs use consumer personal information for marketing purposes without consumer consent.

Question 8: Do you agree with the above stated impacts of OTTs on the consumers? If not in agreement with any of the above stated views, provide detailed response. Additions and suggested solutions are also welcome.

2.3 TO THE GOVERNMENT

The decline in profitability by the telecommunication operators represents lost tax revenue to the government; consumers are using services from global players rather than local entities. This lost revenue is not being gained anywhere else within the economy as OTT providers are domiciled abroad; this represents wealth transfer from countries in which they offer services to their countries of domicile.

Since there is no local presence of OTT providers in the country they cannot be taxed by the government. There are no direct employment benefits to the country and knock-on effects from their business are negligible.

Question 9: Do you agree with the above stated impact of OTT services on the governments? If not in agreement with any of the above stated views, provide detailed response. Additional impacts are also welcome.

CHAPTER 4: POLICY AND REGULATORY ISSUES

4.1 REGULATORY IMBALANCES

There are vast regulatory imbalances between OTTs and Telecommunication Service Providers despite offering substitute services and being competitors of each other. The TSPs bear the costs for the infrastructure, spectrum management and also pay license fees amongst other obligations. The counterpart OTT service providers, however, are not obliged to adhere to any regulatory obligations and do not have to bear any such costs. The Telecommunication Service Providers fall under a regulatory regime whilst OTT players are simply bypassing such a regime. Table 3 describes the differences between Telecommunication Service Providers and Over-the-Top service providers across various dimensions:

Table 3: Regulatory Imbalances

AREA OF REGULATION	TELECOMMUNICATION SERVICE PROVIDERS	OTTs
Licensing	They pay licence fees for operating	OTT providers do not pay license fees
Spectrum, Numbering and associated charges	They are subject to spectrum and numbering fees	Exempt and no contribution to the spectrum and numbering fees
Infrastructure	Invest in networks to deliver services; they are mandated to meet roll-out targets and they incur network maintenance costs.	No investments in networks; no contribution to network costs
Interconnection	Regulatory requirement and they meet associated interconnection costs	No such requirement or contribution as they go "over the top" of the network.
Quality of Service (QoS)	Mandated to adhere to QoS standards stipulated by the	No QoS guarantee QoS issues blamed on

	Regulator	network
Universal Service	Mandated to meet Universal Service obligation	No such requirement for OTT providers
Data Privacy	Adhere to strict data protection and privacy	Practiced on a generally voluntary basis, some adhere to data privacy, some do not
Emergency Services	Required as a license condition	No such requirement for OTT providers
Operating Area	Only serve customers within regulated jurisdiction	Serve any user globally
Provision of legal Intercept and Monitoring	Required as license condition	No such requirement

Further to the above cited regulatory imbalances, OTT providers do not pay taxes to the national government. The Over-the-Top players circumvent the regulatory requirements associated with businesses in the brick and mortar world. They also additionally save on telecommunications infrastructure investment and maintenance costs as well as regulatory costs. This regulatory imbalance or arbitrage opportunity allows them to offer services or goods that are cheaper or free or at competitive rates when compared to the existing models. This makes the playing field uneven.

Question 10: Do you agree that the playing field is not even as explained above? If not in agreement kindly provide detailed reasons. Additions to the cited imbalances are also welcome.

Question 11: In your view, what measures could be taken to remedy the existing regulatory imbalance and level the playing field between OTTs and traditional operators?

4.2 CURRENT REGULATORY FRAMEWORK

The current regulatory framework does not provide for the licensing of Over-the-Top players and is limited in its regulatory oversight of services provided over the Internet. The fundamental difference between the OTTs and the network operators remains the ownership of the network. If OTT players are treated as providers of Application Services, they could be categorised as Application Service Providers under the proposed Converged Licensing Framework which may be implemented soon. The proposed framework has the following licence categories:

i) Network Facilities Licence (NFL),
ii) Network Services Licence (NSL),
iii) Application Services licence (ASL)
iv) Unified Licence
v) International Gateway(s) Licence

Under the proposed Converged Licensing Framework, the scope of the Application Services Licence is given as follows:

"The Application Services Licence shall allow the provision of electronic communication services to end-users such as Internet services, VoIP, messaging services, video conferencing, payphone mobile money among others. Under the same licence, a licensee can offer as many application services as he/she can at no additional licence fees. The Application Service Licence shall be issued as an Individual Licence or Class Licence"

The proposed Application Services Licence has two classes as follows:

i) Application Service Licence Category A:

Caters for Application Service Licensees who are also licensed to offer network services at national or international level. The licence duration is 10 years for category A which will be issued as an Individual Licence with a scope to operate at international and national levels.

ii) Application Services Class licence category B:

This will be an electronic communication licence entitling the holder who neither owns any network facilities nor operates any telecommunications network but leases capacity to provide one or more application services. Examples are internet service providers (ISPs), Mobile Virtual Network Operator (MVNO), Fixed Virtual Network Operator (FVNO), Value Added Services providers. The duration for this licence will be 5 years

The authorisation of OTTs as Application Service Providers under the converged licensing framework will enable a proper regulatory framework to consider cases of revenue sharing. Such authorisation should also incorporate concerns such as emergency services and provision of lawful interception amongst others. If local application providers will be licensed under the new Converged Licensing Framework, international application providers should also be licensed.

> **Question 12: In your view should the OTT players offering communication services through applications be brought under the licensing regime? What are your recommendations? If not in agreement kindly provide detailed reasons.**

4.3 WHAT OTHER COUNTRIES HAVE DONE

Regulators in different countries are dealing with the issue of OTTs in a variety of ways. In most countries, the regulatory framework for the treatment of communication OTT players is currently being debated and the framework largely depends on the stage of development that OTTs have reached in that country and their impact. For communication OTT services, developed countries such as the United States tend towards net-neutrality to promote openness of the internet, non-discrimination and growth of OTTs. On the other hand, some countries have altogether prohibited OTT services or insisted on regulatory compliance. A summary of what other countries have done and are attempting to do is as follows:

THE EUROPEAN UNION

There are no licenses necessary in European Union states for OTT Providers, but in individual countries such as France and Spain OTT providers have been blocked when offering voice services that connect to the networks of the fixed and mobile operators. Justification is that in offering voice services the OTT provider is then behaving like a telecommunications operator and should fulfil the obligations of a telecommunications operator as well i.e. offer emergency services, provide for legal interception, pay taxes, Universal Service Obligations etc.

French Telecom regulator ARCEP demanded that Skype, which is owned by US software giant Microsoft, register as a telecommunication operator in the country. ARCEP's view is that by providing French users with services that allow them to make phone calls to or from a device connected to the internet, (a computer or a smartphone) as well as to the traditional telecoms network (e.g. landlines), Skype is in fact providing electronic communications services. The regulator also demanded that Skype must be compliant with the French Postal and Electronic Communications Code (CPCE) and must meet certain obligations as they are in the business of providing electronic communications; this includes routing of emergency calls and implementing measures required to perform legally ordered interceptions. However, Skype has refused to register as a telecoms operator in France and was blocked by some of the French telecommunications operators. The matter is still to be concluded

In an attempt to encourage OTT voice providers to participate in legal intercept and emergency call access the United Kingdom offers them assigned numbers from a specific range which is clearly identifiable from normal telephone numbers.

SOUTH KOREA

South Korea is a strong market in OTT services because of its broadband penetration. As far back as 2008, 3G mobile networks had reached 99 percent of its population. Because of the rapid uptake of smartphones and mobile devices, growth of various OTT services especially OTT VoIP was exponential. This raised serious concerns about the sustainability of business models of telecom operators and prompted action by the regulator. The KCC made it legal for telecommunication operators to charge their

customers extra fees to use of foreign OTT VoIP apps or block their use entirely. The local Telecommunication Services Providers collaborated in developing their own local apps and making them interconnected and interoperable services rather than standalone products.

TAIWAN

The National Communication Commission (NCC) of Taiwan is planning to regulate mobile applications particularly those offering voice services. Following this change, certain mobile app developers will be required to obtain an operating license from the NCC.

SAUDI-ARABIA

Some countries such as Saudi Arabia and other Middle Eastern countries have blocked the provision of OTT VoIP services. In Saudi Arabia, a ban on Viber was implemented by The Communications and Information Technology Commission (CITC), on the basis that it had failed to comply with the communications rules and regulations of the kingdom. On March 2014, the Commission released a statement indicating the possibility that it would ban a number of Internet communications services, including Viber, Skype, and WhatsApp, unless the companies modified their products to comply with Saudi communications laws. However, thus far, only Viber has been banned.

EGYPT

In 2010, Egypt's National Telecoms Regulatory Authority (NTRA) implemented a ban on Skype. According to Egyptian law, all international calls are required to go through 'the legal gateway', a network controlled by majority state-owned Telecom Egypt. In 2013, it was reported that the NTRA was considering blocking Viber and WhatsApp due to economic and security concerns.

TRINIDAD AND TOBAGO

The issue of the regulation of OTT VoIP is currently under consultation in Trinidad and Tobago. In 2015 the Telecommunications Authority of Trinidad and Tobago (TAAT) issued a consultation document on the treatment of OTT services in the country, in particular OTT VoIP. Whilst a ban of the services is not envisaged they seek to foster collaborative arrangements between OTT VoIP operators and authorised telecommunication service providers to ensure that their local operators are able to recoup a fair share of revenues from use of OTTs.

One of the overarching challenges with imposing national obligations on "pure" OTT providers relates to legal jurisdiction and extraterritoriality, and how rules would or could be applied to OTT providers that do not have a physical presence in a country. In order to bring OTT providers directly under local jurisdiction, a country may seek to impose data localization laws on OTT providers that require them to install a server in-country so as to subject providers to local jurisdiction. For example, Vietnam's Ministry of Information and Communications (MCIT) issued a Circular in August 2014 proposing to require OTT providers to install at least one server in Vietnam; however this is yet to reach fruition. The issue of OTTs is also under discussion in African states such as Nigeria, Ghana and South Africa

> **Question 13**: In what manner can the proposals for a regulatory framework for OTTs service in Zimbabwe be drawn from those of other jurisdictions? What practices should be prescribed?

CHAPTER 5: OPTIONS FOR THE TREATMENT OF OTTs

In the current absence of OTT regulation, the strategies for combating the impact of OTTs on operator viability can be classified into two groups i.e. price based strategies and non-price based strategies as follows:

A.PRICE BASED STRATEGIES

1. THE OPPORTUNISTIC APPROACH

This approach involves charging consumers a premium for OTT services; for example, by only offering OTT VoIP services with premium data plans, however keeping the per minute tariff lower than the traditional voice call. This approach enables the operator to obtain revenues from the use of OTT VoIP on their network. However this approach may lead to customer dissatisfaction, as OTT VoIP becomes more costly than before. Customers could also churn if other players in the market choose to keep the status quo. The opportunistic approach of charging premium data for OTT VoIP has been used in other countries. After a failed attempt to block Skype, the Nordic operator, TeliaSonera, now offers Skype but only with select data plans. This approach involves charging consumers a premium for OTT services and only offering OTT VoIP services with premium data plans.

> **Question 14: Do you agree that with the view that customers should be charged a premium on data for using OTT VoIP e.g. WhatsApp Calling, Skype and Viber amongst others? If not in agreement, give detailed reasons for your answer.**

B] NON-PRICE BASED MECHANISMS

1. THE COLLABORATIVE APPROACH

This strategy involves partnering with select OTT players to develop a mutually beneficial relationship. The business model is often a revenue share between both parties. There are several levels of Telecommunications Operator-OTT

collaboration, which range from simple partnerships to investments or joint ventures. A lighter form of collaboration can involve the telecommunications operator simply acting as an aggregator of OTT services and earn commission. The premise of this approach is that OTTs should not just ride for free on operators' networks and operators should receive some fair compensation for the use of their networks. Such partnerships are often not exclusive.

Operators such as Telenor, Vodafone, NTT DoCoMo, AT&T and Verizon are hosting carrier channels in Google Play and are billing for apps and content sold via Google Play. This is a form of collaboration between OTT and telco operator for mutual benefit.

> **Question 15: Do you think the collaborative approach as explained above is feasible? What challenges could hinder such collaboration and what framework could be put in place to ensure revenue sharing is implemented?**

2. THE COMPETITIVE APPROACH

This approach sees the telecommunication service providers develop their own OTT services to compete against the established OTT players. They either develop the necessary expertise in-house or acquire an entity with the relevant skills and know-how and then rebrand and sell these services as their own thus enabling the telco to own the consumer relationship. Such an approach positions the telecommunications operator as an innovator and improves its brand equity. The telecommunications operator`s OTT services can help them expand into adjacent markets and have the potential to generate new revenue streams, resulting in growth. In addition, OTT services are often not limited to telecommunication operator`s own subscriber base. This means that operator can reach a much broader consumer base through OTT services.

In-house development requires the telecommunications operator to have the adequate software and IT skills to launch such services. The upfront investment for such an approach can be quite high and the return on investment is often unclear as

the business models are very different to their traditional business. The OTT landscape is extremely competitive and grabbing consumers away from established OTT services can be very challenging. This approach has been used by some operators such as Telefonica, T-Mobile and Orange. Telefonica, T-Mobile and Orange successfully launched their own OTT communication services i.e. TU Me, Bobsled and Libon respectively.

Question 16: Do you think leaving the local operators to pursue the competitive approach against OTT players is the efficient and sustainable approach? Kindly provide reasons for your answer.

Question 17: What measures can be adopted to encourage use of Zimbabwean developed OTT apps vis-à-vis foreign owned OTTs?

3. THE REACTIVE STRATEGY

In some countries measures such as traffic optimization, throttling and Wi-Fi offloading have been used to moderate the impact of OTT services, especially those requiring a lot of bandwidth. The advantage of this approach to operators is that it reduces the strain on the network and the need for additional capital investment in infrastructure upgrades. However this strategy does not help with protecting core revenues or generating new service revenue. It can lead to very poor user experience.

Question 18: Do you think operators should be allowed to use traffic management practices as those stated above in order to ease the impact of OTTs on their networks? If so what forms of management practices should be permitted? If not, kindly give detailed reasons.

4. AGGRESSIVE STRATEGY

The aggressive strategy involves blocking selected OTT services. This strategy, if applied to OTT VoIP, halts voice substitution, thereby protecting local operators` core revenues. If content-streaming providers are blocked, it reduces the load on the network. This strategy has a high dependency on net-neutrality policies in a given country. If all operators in a given market are not aligned, then the operator implementing such an approach is likely to suffer significant customer attrition. This strategy has been used in other jurisdictions such as explained in 4.3 and OTT voice services have been the targets.

> **Question 19: Which of the above options for dealing with the negative impact of OTTs is best suited for the Zimbabwean situation?**

> **Question 20: What are your overall recommendations on the issue of OTTs as discussed in this paper? Should the status quo be maintained? Kindly provide detailed responses.**
>
> **Question 21: Are there any other issues that have a bearing on the subject discussed?**

LIST OF CONSULTATION QUESTIONS

Question 1: Do you agree with the definitions of OTT services stated above? If not in agreement, please provide reasons. Suggestions are also welcome

Question 2: Do you agree with the above stated challenges? Could it be considered too early to establish a regulatory framework for OTT services in Zimbabwe? Kindly provide explanations for your responses.

Question 3: Do you agree with the given overview of types of OTT Communication services? Additions are welcome

Question 4: Do you agree with the given explanation of the ways in which OTT operators get access to end users? If not provide detailed reasons. If the explanation is not exhaustive additions are welcome.

Question 5: Do you agree with the stated characteristics of OTT services above? If not provide detailed reasons. Additions are also welcome.

Question 6: Do you agree with any of the above stated drivers of OTT growth? If not kindly provide reasons. Additions are also welcome.

Question 7: Do you agree with the explained impacts of OTTs on the licenced telecommunication service providers in Zimbabwe? If not in agreement, kindly explain in detail. Additional impacts are also welcome

Question 8: Do you agree with the above stated impacts of OTTs on the consumers? If not in agreement with any of the above stated views, provide detailed response. Additions are also welcome

Question 9: Do you agree with the above stated impact of OTT services on the governments? If not in agreement give detailed response.

Question 10: Do you agree that the playing field is not even as explained above? If not in agreement kindly provide detailed reasons. Additions to the cited imbalances are also welcome.

Question 11: In your view, what measures could be taken to remedy the existing regulatory imbalance and level the playing field between OTTs and traditional operators?

Question 12: In your view should the OTT players offering communication services through applications be brought under the licensing regime? what are your recommendations. If not in agreement kindly provide detailed reasons.

Question 13: In what manner can the proposals for a regulatory framework for OTTs service in Zimbabwe be drawn from those of other jurisdictions? What practices should be prescribed?

Question 14: Do you agree that with the view that customers should be charged a premium on data for using OTT VoIP e.g. WhatsApp Calling, Skype and Viber amongst others? If not in agreement, give detailed reasons for your answer.

Question 15: Do you think the collaborative approach as explained above is feasible? What challenges could hinder such collaboration and what framework could be put in place to ensure revenue sharing is implemented?

Question 16: Do you think leaving the local operators to pursue the competitive approach against OTT players is the efficient and sustainable approach? Kindly provide reasons for your answer.

Question 17*: What measures can be adopted to encourage use of Zimbabwean developed OTT apps vis-à-vis foreign owned OTTs?

Question 18: Do you think operators should be allowed to use traffic management practices as those stated above in order to ease the impact of OTTs on their networks? If so what forms of management practices should be permitted? If not, kindly give detailed reasons.

Question 19: Which of the above options for dealing with the negative impact of OTTs is best suited for the Zimbabwean situation?

Question 20: Are there any other issues that have a bearing on the subject discussed?

Question 21: What are your overall recommendations on the issue of OTTs as discussed in this paper? Should the status quo be maintained? Kindly provide detailed responses.